

# ***HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO SECTION***

Supplemental Alternative  
Analysis Report

Presented to:

California High-Speed Rail  
Authority Board

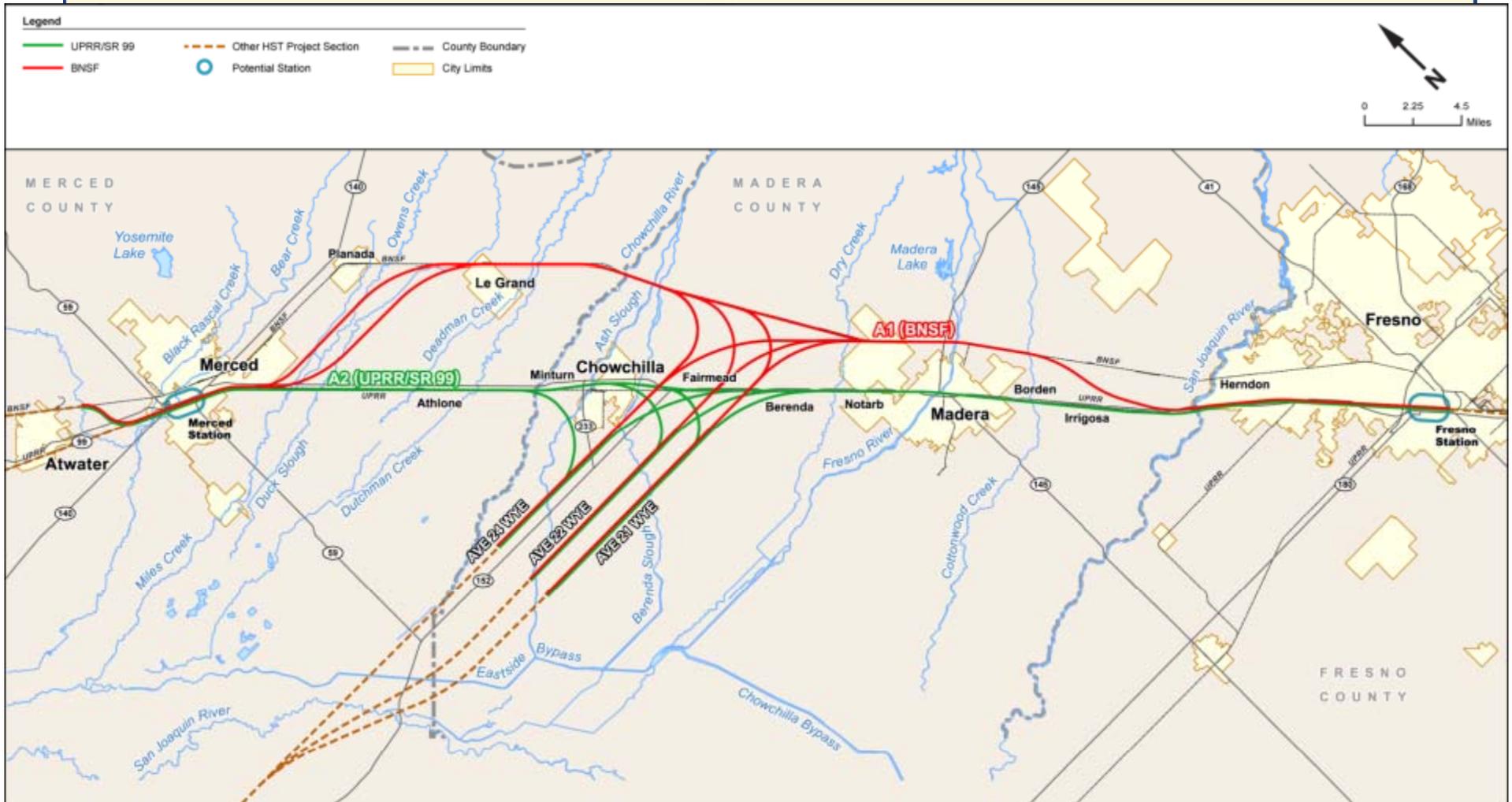
May 5, 2011



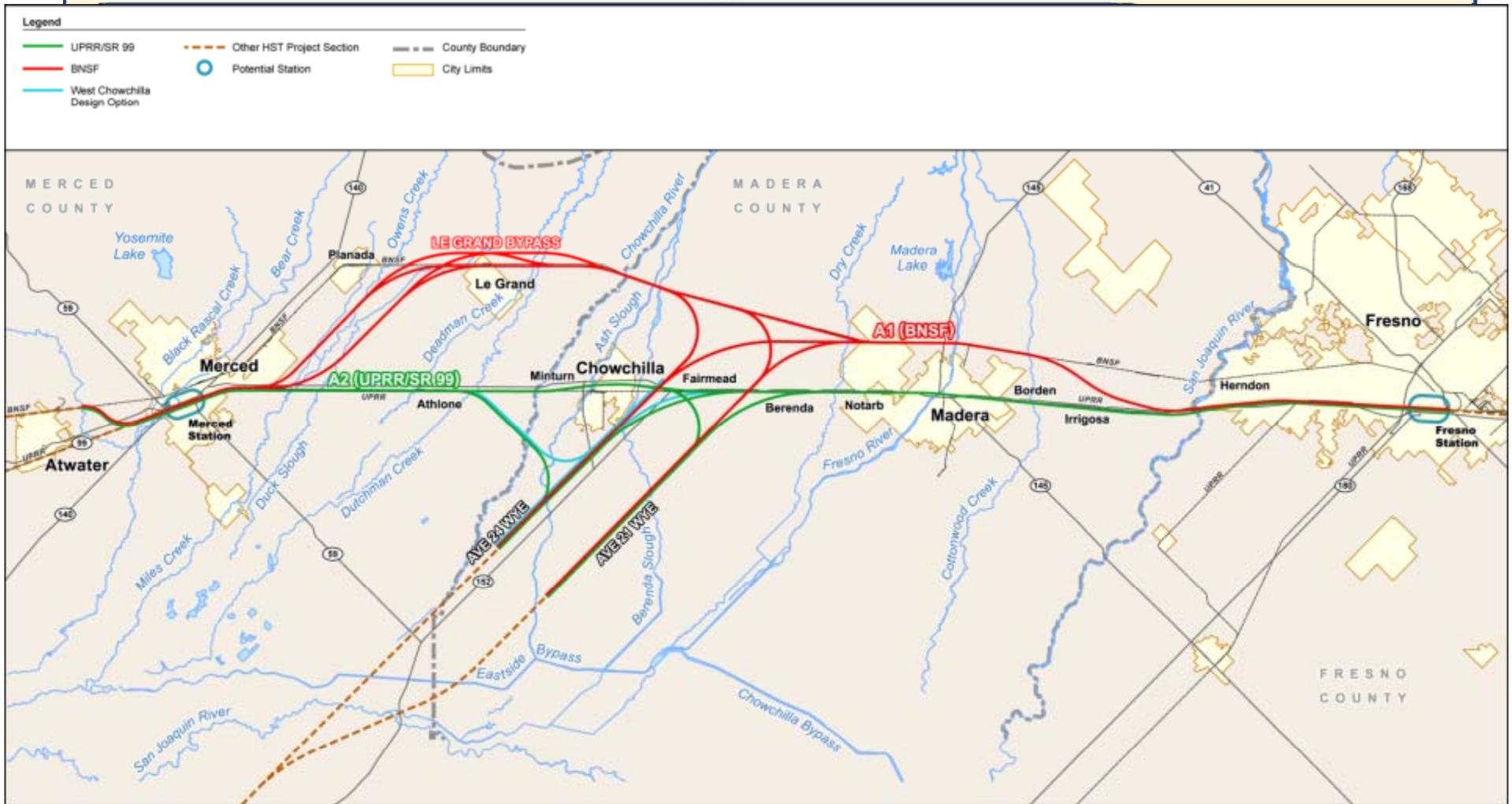
## ***SUPPLEMENTAL AA BRIEFING TO BOARD***

- Background
- Status To Date
  - Preliminary AA Alternatives (April 2010)
  - Supplemental AA (August 2010)
- Outreach Effort
- Value Engineering
- Recommendations
- Next Steps

# PRELIMINARY ALTERNATIVES PRIOR TO AUGUST 5, 2010 BOARD MEETING



# ALTERNATIVES CARRIED FORWARD AFTER AUGUST 5, 2010 BOARD MEETING



## ***OUTREACH PROGRAM***

- Since Last Supplemental AA (August 2010):
  - Total of 21 Public & Technical Working Group meetings were held :
    - Transportation/Planning Agency Working Groups,
    - Public Information Meetings, Stakeholder Briefings,
    - Elected Official Briefings, Community Organizations
    - Agricultural, Tribal Consultations, Multiculturals
- Since Project Initiation (November, 2008):
  - 108 meetings

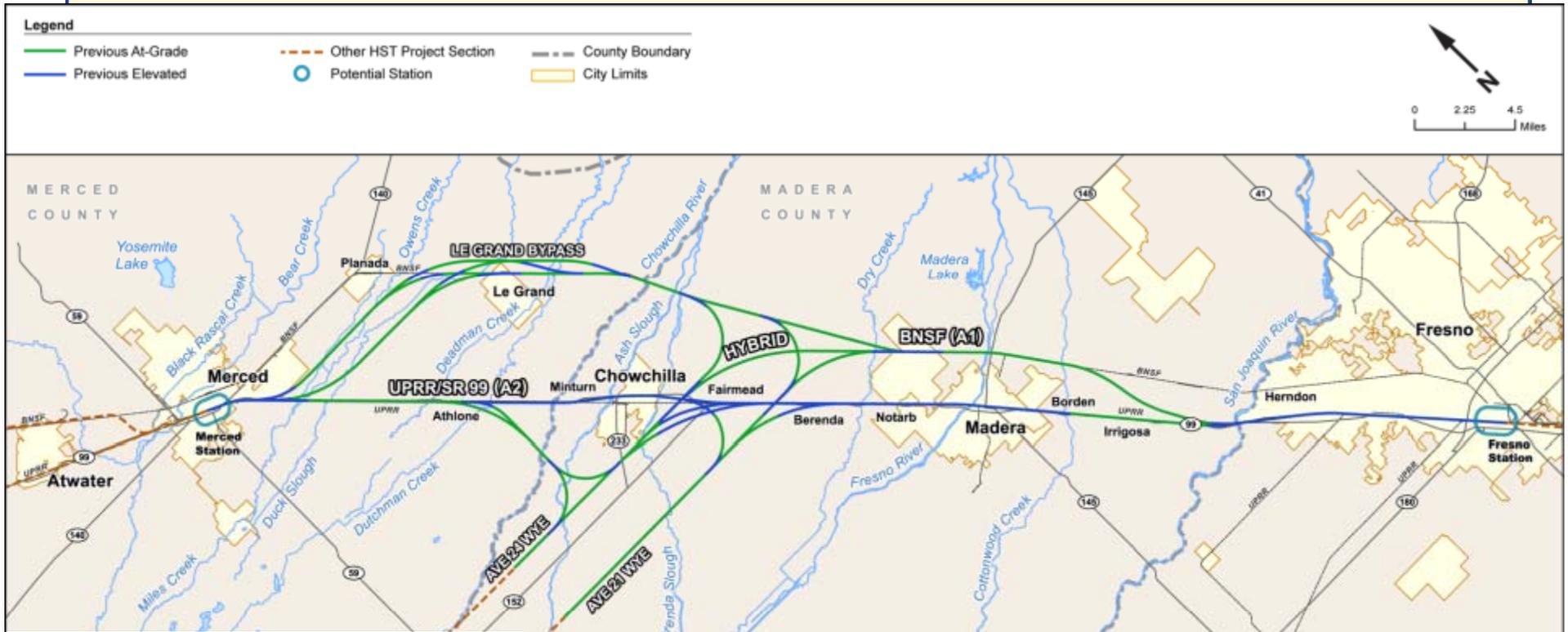
## *VALUE ENGINEERING CONCEPT*

- Continuous review throughout Project
  - Reduced Impacts
  - Increased Efficiency
  - Reduced Life Cycle Cost
  - Other Synergetic Benefits
    - Grade separate freight rail crossings
    - Eliminate train whistle/grade crossing warning bells
    - Improve traffic flow & emergency service access

## *CURRENT VALUE ENGINEERING EFFORT*

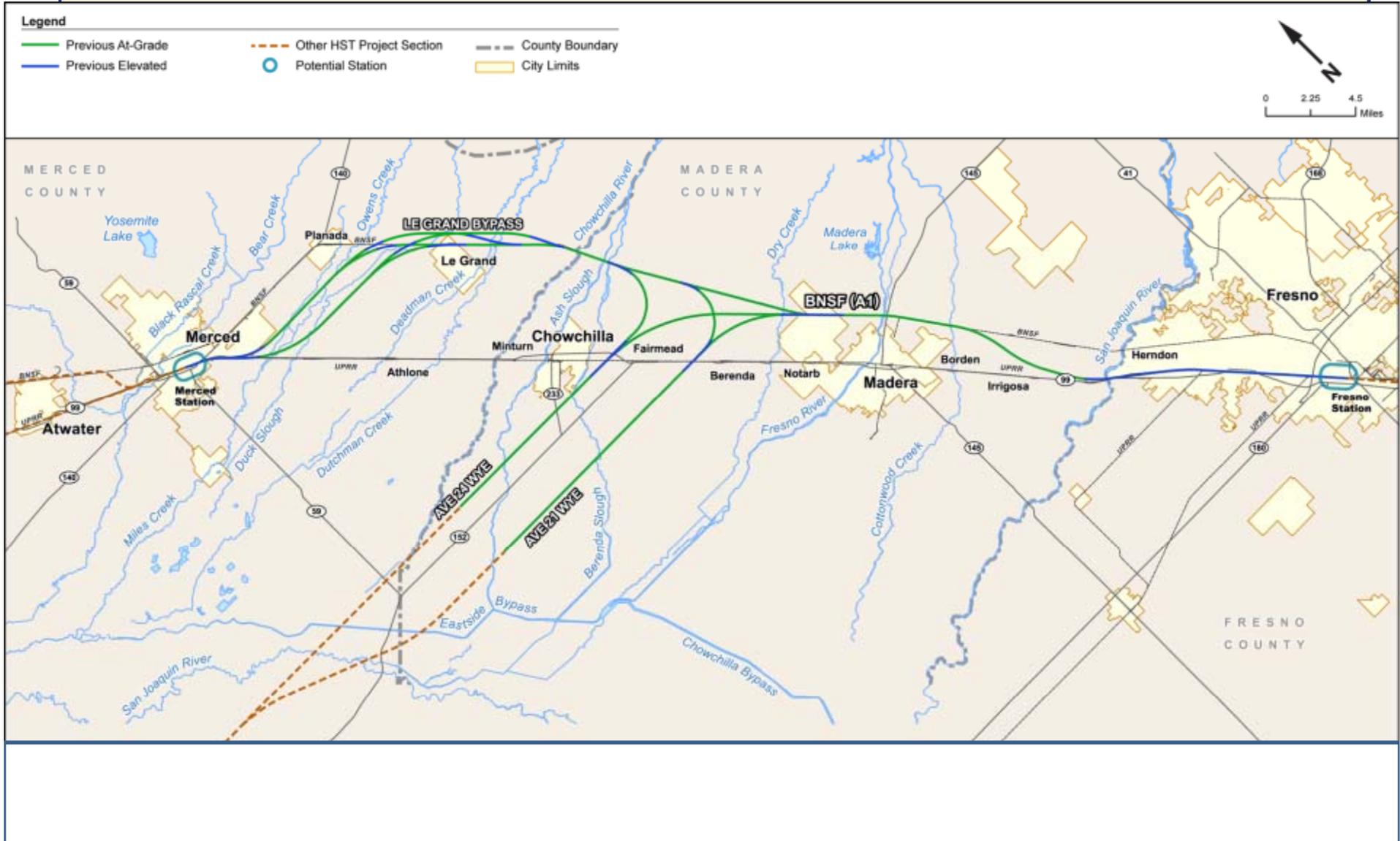
- Reduced Extent of Elevated Structure:
  - Modified geometry of at-grade/elevated transitions on curves
  - Worked with Merced and Fresno to identify areas with potential at-grade solutions
    - Identified feasible locations
    - Eliminated UPRR at-grade crossings
    - Maintained/enhanced traffic flow
    - Introduced at-grade stations

# PREVIOUS AT-GRADE & ELEVATED PROFILES

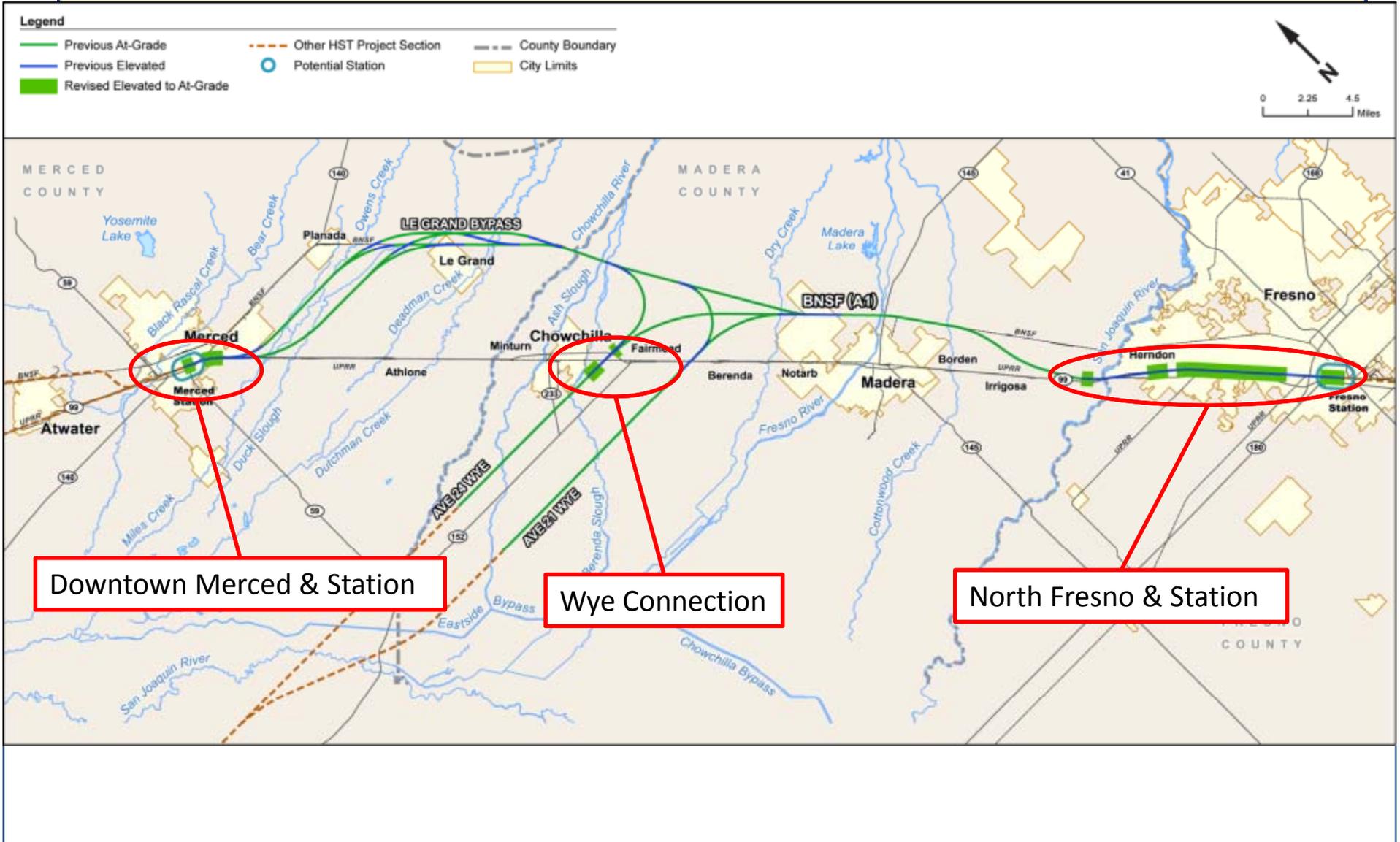


Profile Legend	Alignment	Wye Connection
Previous Elevated: <span style="color: blue;">———</span>	BNSF (A1)	Ave 21 or Ave 24
Previous At-Grade <span style="color: green;">———</span>	UPRR/SR99 (A2)	Ave 21 or Ave 24
<span style="color: blue;">———</span>	Hybrid	Ave 24

# BNSF (A1) ALTERNATIVE

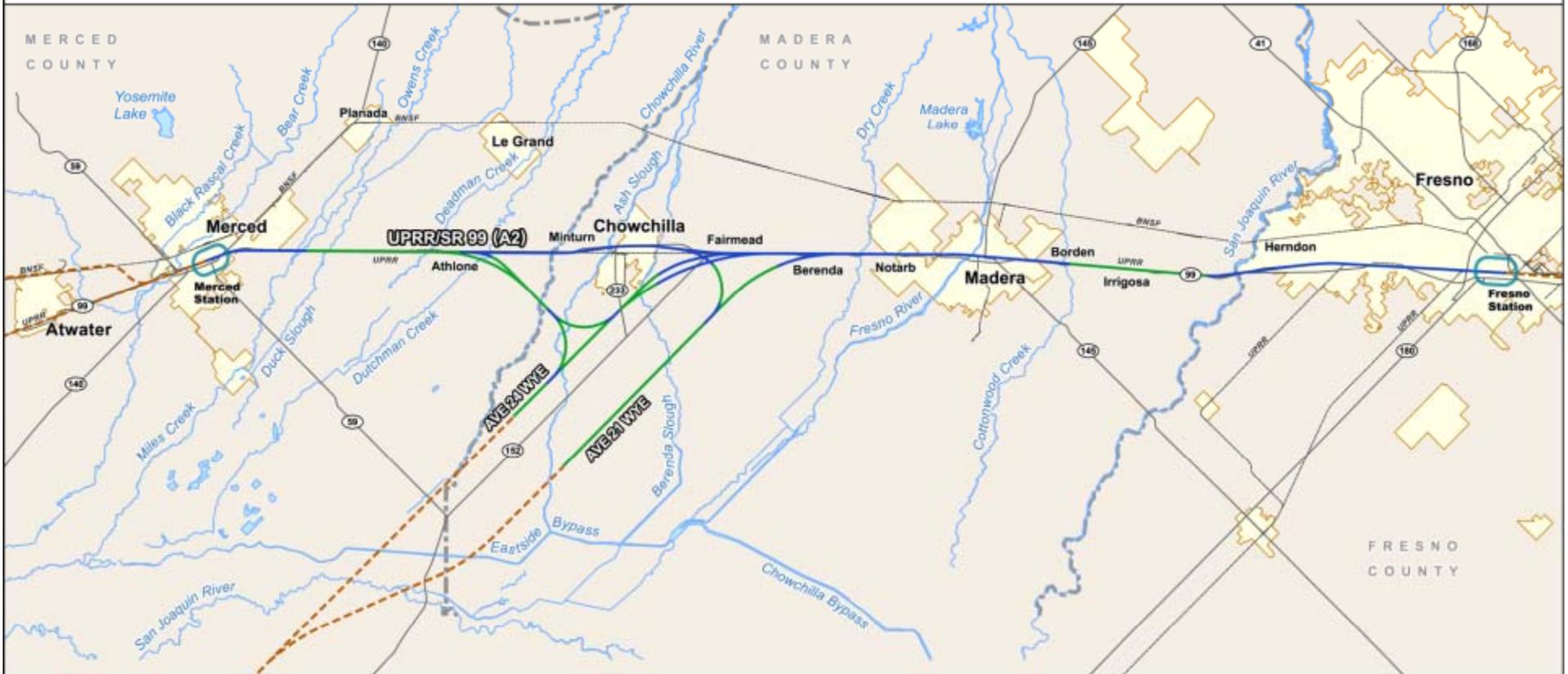
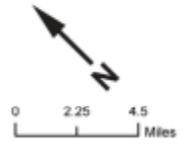


# BNSF (A1) ALTERNATIVE OPTIMIZED PROFILE

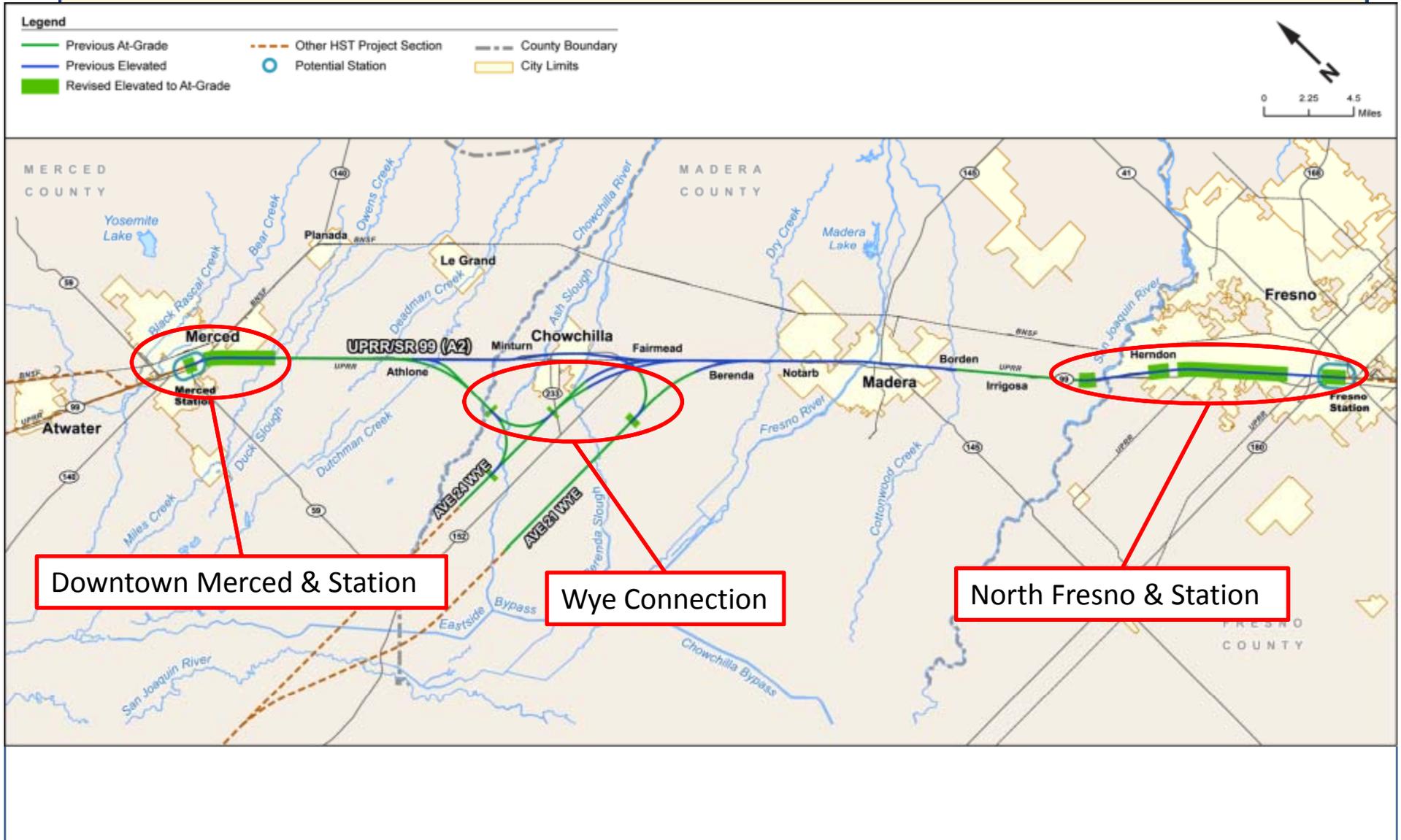


# UPRR/SR99 (A2) ALTERNATIVE

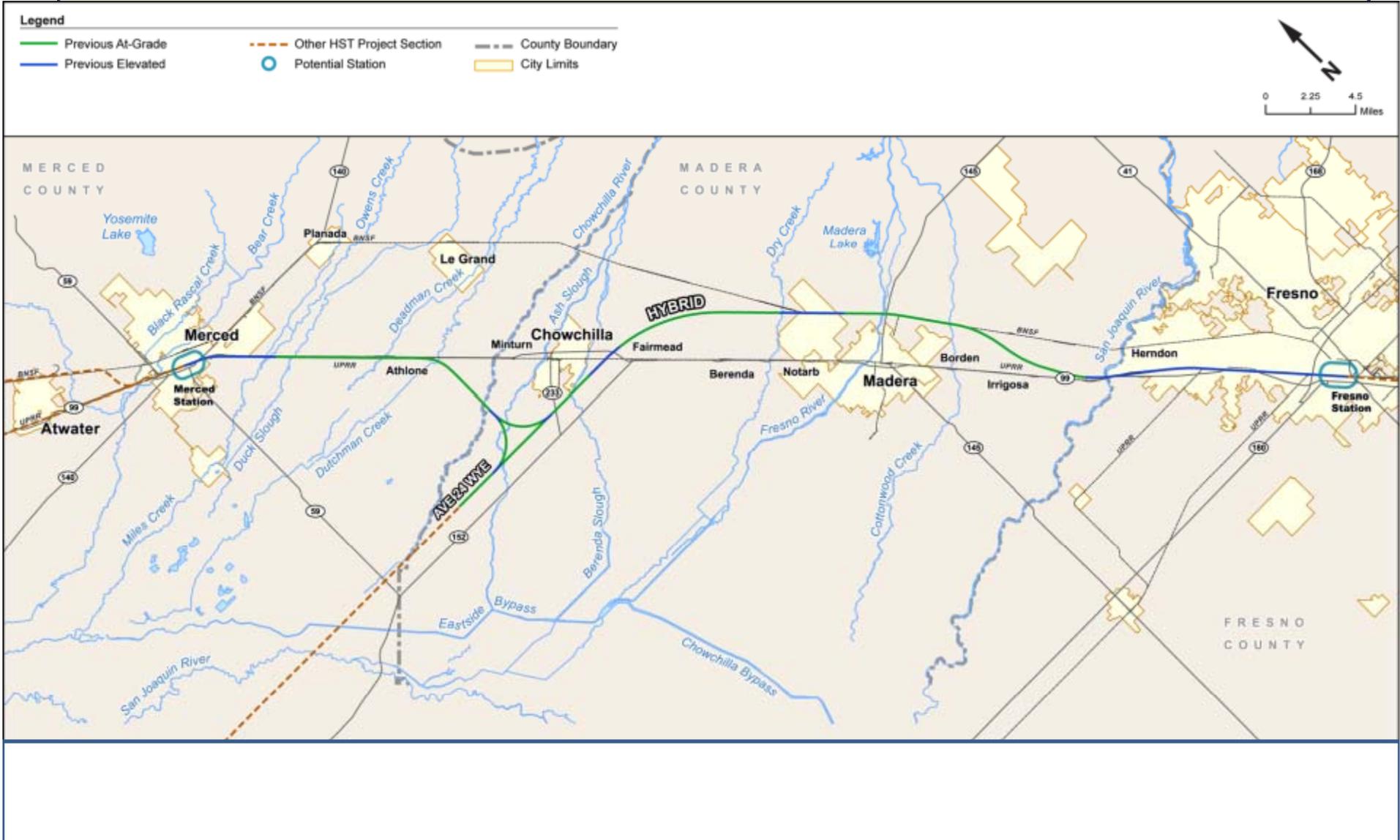
- Legend**
- Previous At-Grade
  - Previous Elevated
  - Other HST Project Section
  - Potential Station
  - County Boundary
  - City Limits



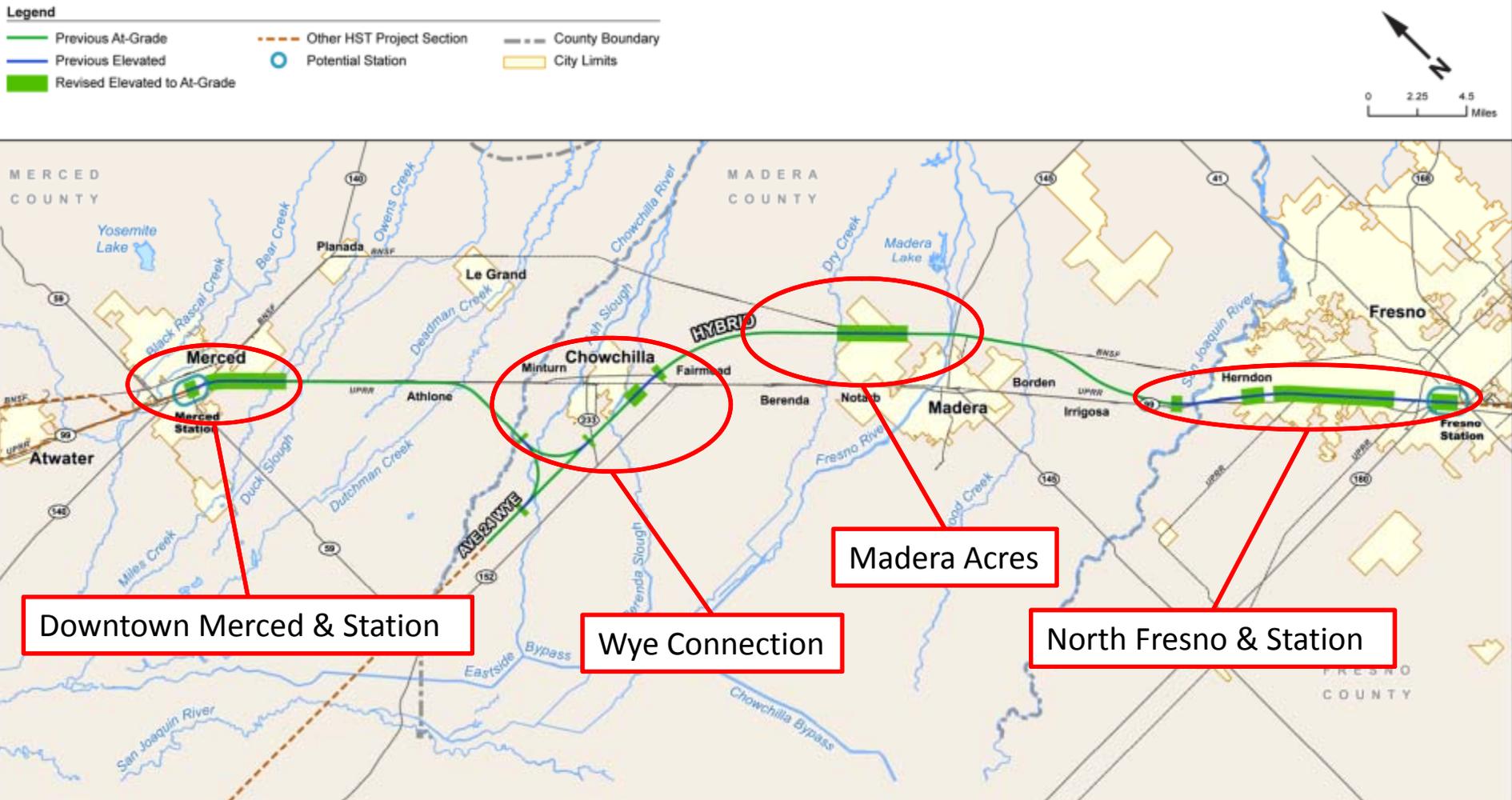
# UPRR/SR99 (A2) ALTERNATIVE OPTIMIZED PROFILE



# HYBRID ALTERNATIVE



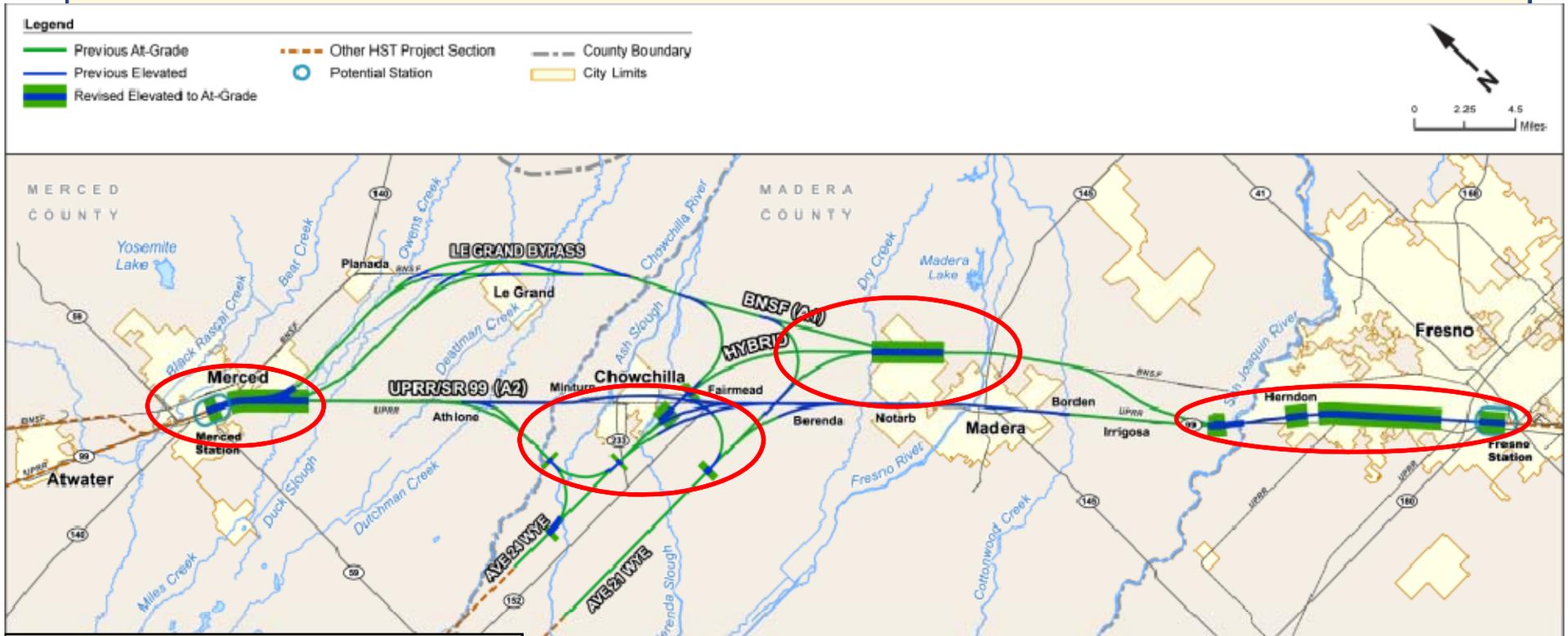
# HYBRID ALTERNATIVE OPTIMIZED PROFILE



# ALL 3 ALTERNATIVES

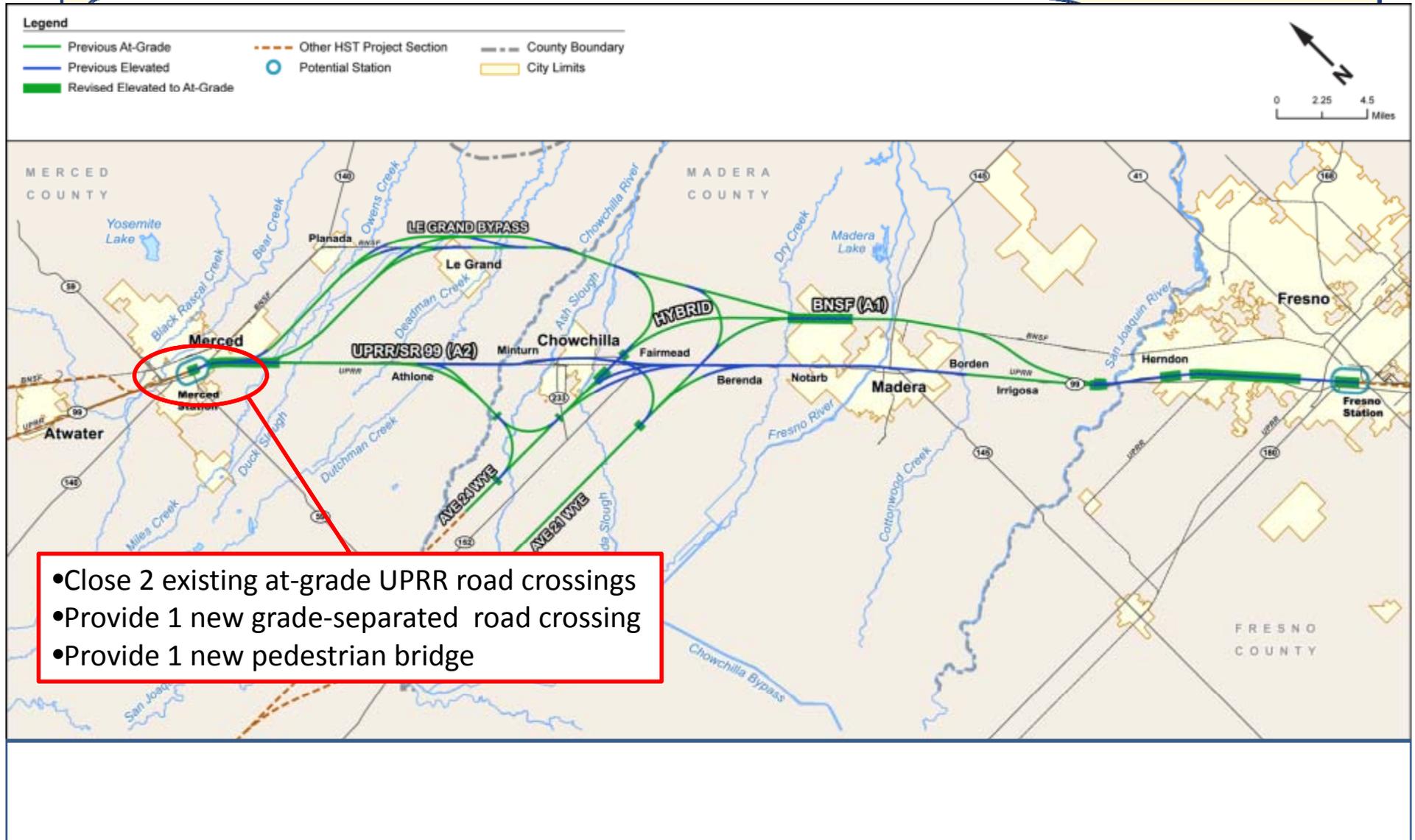


# ALL 3 ALTERNATIVES OPTIMIZED PROFILE

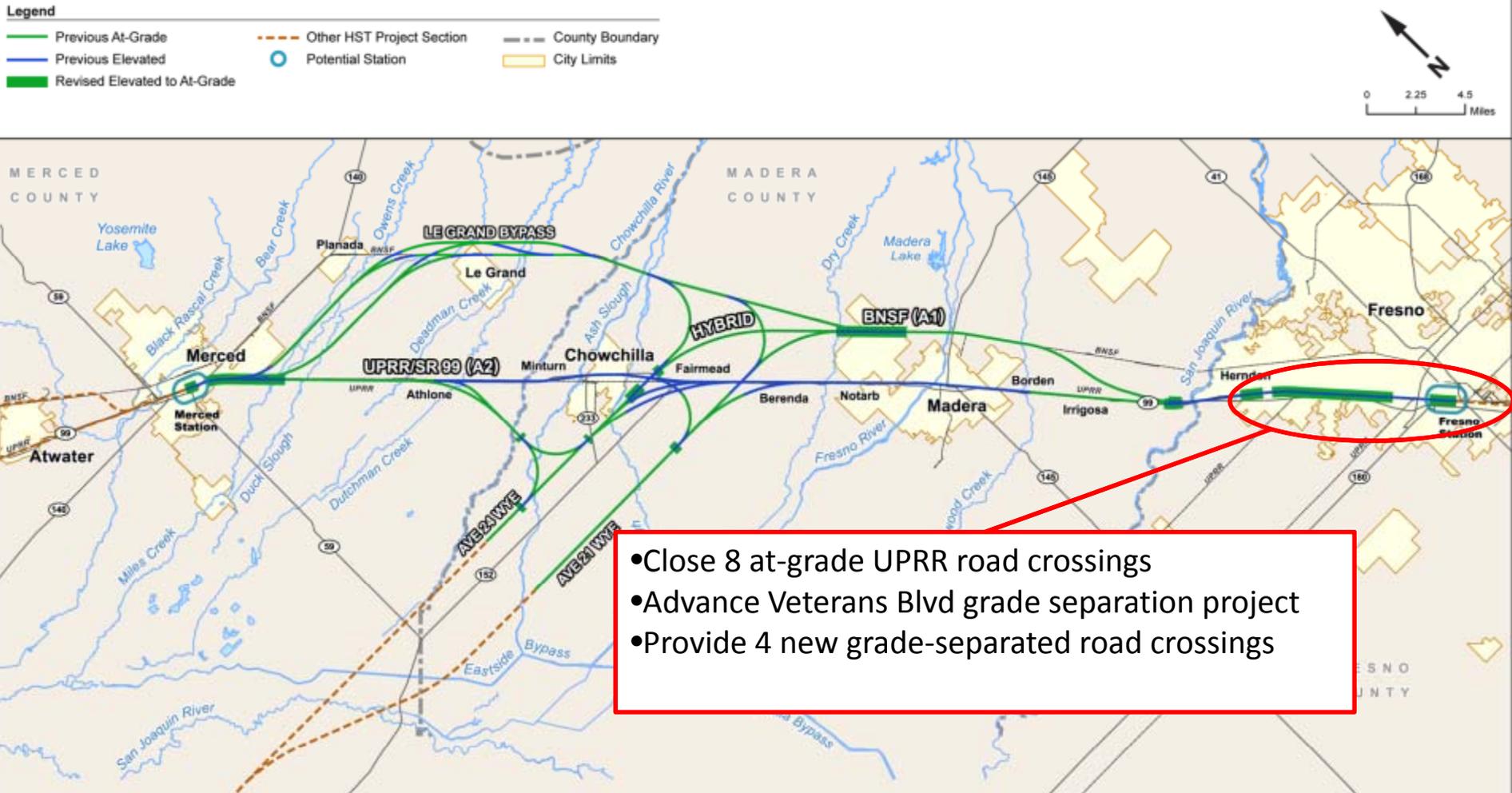


Profile Legend	Alignment	Revised Elevated to At-grade
Previous Elevated: 	BNSF (A1)	9 to 10 miles
Previous At-Grade 	UPRR/SR99 (A2)	9 miles
Revised to At-Grade: 	Hybrid	13 miles

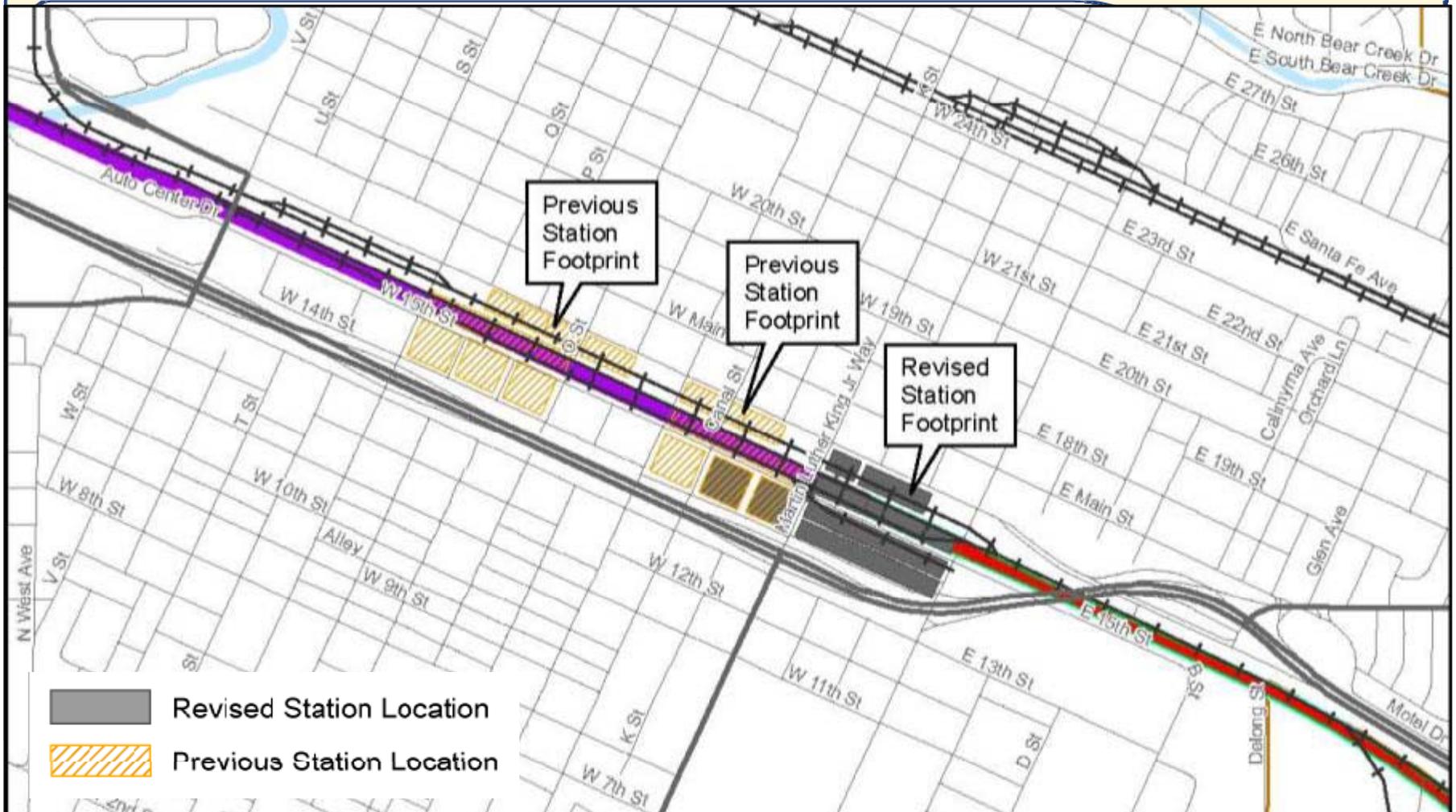
# MERCED ROAD MODIFICATIONS & PEDESTRIAN ACCESS



# NORTH FRESNO ROAD MODIFICATIONS

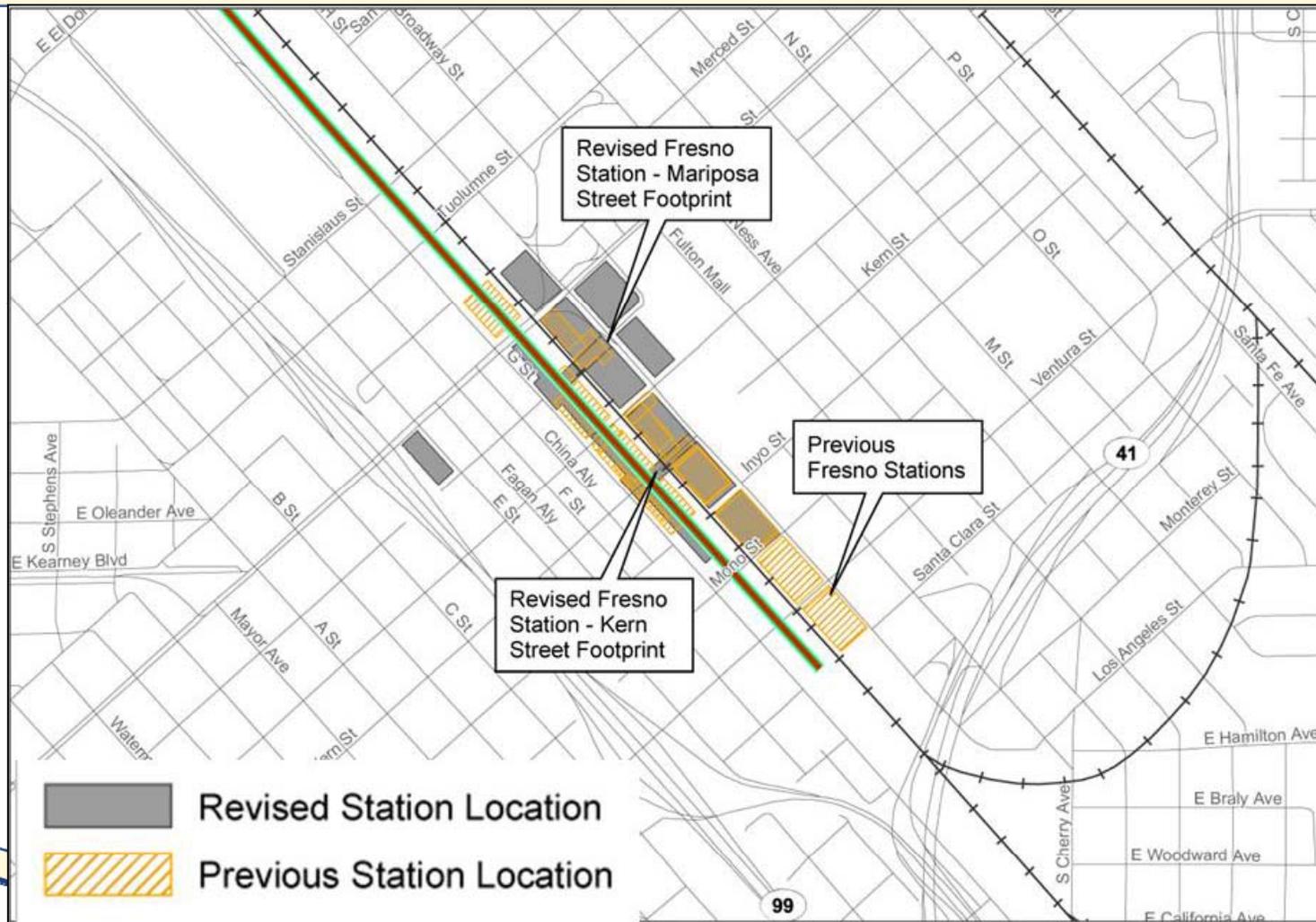


# AT-GRADE MERCED STATION REVISED LOCATION (BETWEEN G & MLK)



# AT-GRADE FRESNO STATION

REVISED LOCATIONS (2 OPTIONS: G & BROADWAY, G & H)



## ***AGENCY FEEDBACK***

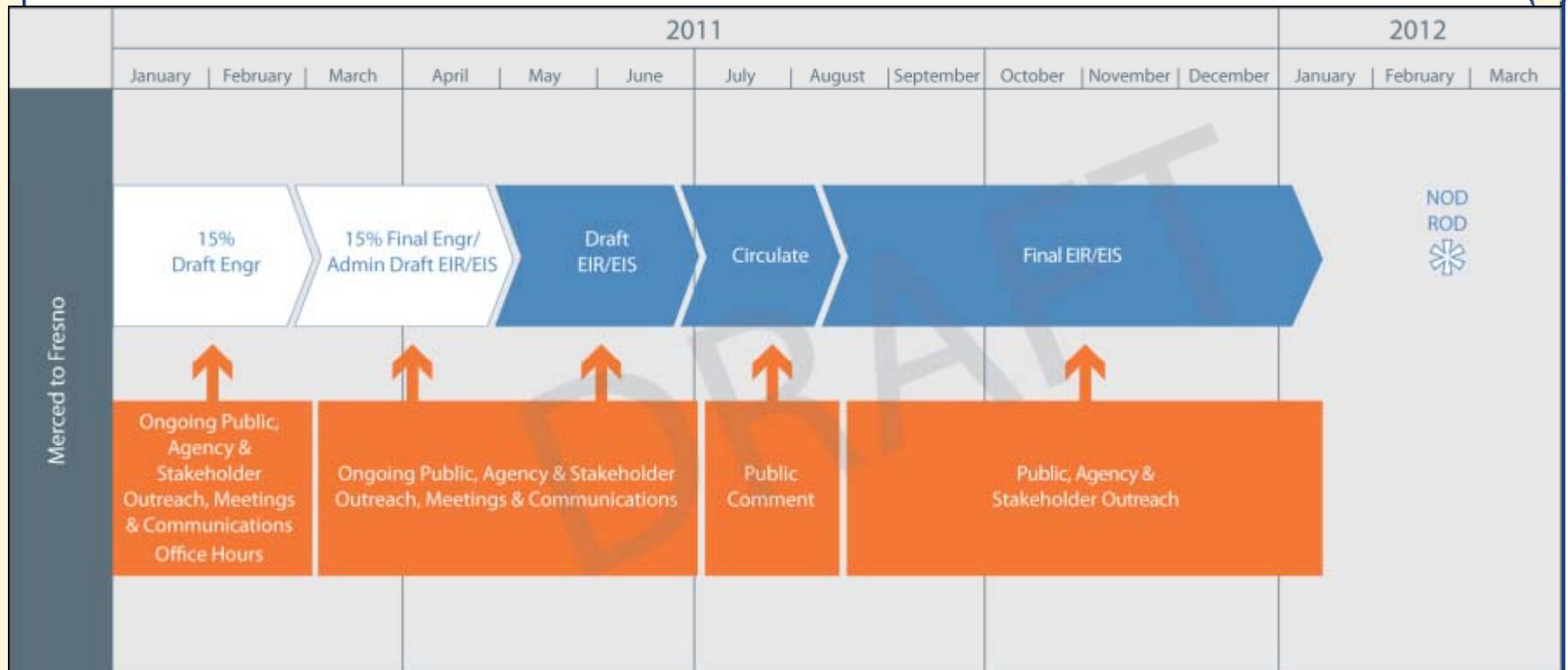
<b>Involved Agencies</b>	<b>Status/Early Feedback</b>
City of Fresno	With included grade separations, City of Fresno is in support
City of Merced	With included grade separation, City of Merced is in support
Caltrans	No change to previous SR99 realignment, continuing coordination
UPRR/BNSF	Continuing coordination

## *RECOMMENDATIONS*

### Profile Refinements, Elevated to At-Grade

- Downtown Merced and Fresno Stations
  - ✓ Carry forward at-grade stations
  - x Do Not Carry forward elevated stations
- Elevated Structures to At-Grade
  - ✓ Carry forward profile refinement to reduce elevated structures and increase at-grade segments.

# NEXT STEPS



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